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## SOCIAL TYPES AND SOCIAL SELECTION.

*Aspects of Social Evolution.* First Series. Temperaments. By J. Lionel Tayler, M.R.C.S. Pp. xxviii + 297; illustrated. (London: Smith, Elder and Co.) Price 7s. 6d.

ARE they not methodologically equivalent, the three systems of classification—(a) of plants into herbs, shrubs and trees; (b) of animals into birds, beasts and fishes; and (c) of humans into the sanguine, the lymphatic, the bilious and the melancholy? Why, then, is it that science, having long ago given us a *Systema Naturae* and a *nomenclature botanicus and zoologicus*, still leaves us almost without the rudiments of a *Systema Hominis* and a *nomenclature sociologicus*? It may be asked in reply, What of the anthropologists and their half century of taxonomic labours in the name of science? But the anthropological classifications belong, in appearance at least, to natural and not human history. They do not rise through psychology into sociology. It is true the biologist rejects them, and must continue to do so, as long as the anthropologist cannot formulate his fundamental concept—that of race—in biological terms. Of late the anthropologist has shown signs of attaching himself to the psychologist; and this suggests another form of the initial question, Why have anthropologists not endeavoured to formulate even a provisional classification of psychological types? Why have they, with unconscious naïvete, been content to accept implicitly the popular classification that traditionally survives from early Greek thought? To this question the positivist will be ready with his answer, but perhaps it were wiser to leave it as a shameful reminder to the laggard sociologist.

During the past few years there have appeared, notably in France and in America, a considerable number of systematic studies of psychological types. Dr. Tayler's book is the first systematic endeavour towards taxonomic psychology in this country. Written without reference to foreign sources, it testifies the more convincingly to the presence of a general movement of thought. Though tardily manifesting itself here in systematic form, yet the movement is conspicuously marked by British initiative. By postulating (in "Hereditary Genius," 1869) the variability of psychological type and the correlation of this variability with national history, Francis Galton made a pioneer advance of the first importance in linking psychology with sociology and both with biology. A way was thus opened for several new lines of research, of which some have been considerably developed. Of these two only call for reference here—(a) taxonomic studies of character and temperament, alluded to above as being prosecuted mainly by French psychologists like Paulhan, Ribéry and Fouillée, and by American sociologists like Giddings, Patten and Adams; and (b) evolutionist studies seeking to de-

cipher selective processes in history and in contemporary civilisation whereby certain types are eliminated and others encouraged. Of these latter investigators, notable examples are Lapouge, Seeck, Ammon, Hansen, &c.

Dr. Tayler's book belongs to both these lines of research, and contributes original material—both observational and speculative—to each. To the more taxonomic side, Dr. Tayler contributes (a) studies of several selected types affirmed to be of a highly representative social character; (b) the suggestion that the functioning of certain glands (especially the sexual ones) is a main factor in determining temperaments, and hence the idea that from this source are derivable principles of division for a natural classification of temperaments. To the more evolutionist side Dr. Tayler contributes the conceptions of domestic selection and occupational selection as dominant factors in that complex of historical processes which collectively are increasingly described as social selection in contradistinction to natural selection.

The salient feature of the book is the contrast set up between two opposed series of types. The one series is composed of variants on the type generalised by popular observation in the "John Bull" concept. The other series, in contrast to the first, is characterised by (a) a more delicate and complex physiological organisation attuned to an increasing complexity of environment; (b) a more complete and subtle sexual differentiation, both physical and psychical; (c) a relatively greater subordination of carnal to culture interests; and (d) readier response to the social ideals created by art, sanctioned by religion, formulated by science. For these two contrasted series of sociological types observable in contemporary western civilisation, Dr. Tayler uses the titular designation of "primitive" and "evolved." While remaining true as a general characterisation, yet these words will need to be supplemented by more specific designations should a sound working hypothesis result from Dr. Tayler's observations. Mr. Galton's coinage, eugenics, having been widely accepted, suggests further utilisation. In respect of the robust, coarser, more carnal and materialist type, the word palæogenic would at once resume its observational basis and leave scope for further terminological development in the study of type variants and their social environment. In the same way the correlative word neogenic would designate the contrasted order, whether of environment or of organism, characterised by the finer, subtler, more cultural and idealist type.

Grant the conception of the two contrasted series of palæogenic and neogenic types as a fundamental principle of division in the classification of human types of character, and the centre of interest shifts to other than taxonomic issues. What, we ask, is or can be known of the historical development of these types in individual and racial evolution; what of the interaction between themselves as individuals and as groups; what of their environmental interrelationships; what of their future phases of evolution; what modification may be consciously devised; what ideals consciously promoted? And, moreover, each of these

questions has to be asked alike on many planes—biological, psychological, economic, ethical, &c. Thus does every initiative in science open up a whole system of new lines of investigation. The student who gives himself to Dr. Tayler's guidance will be carried no little distance along several of these new lines of research; and, moreover, it will be surprising if, after that initiation, the student does not himself acquire the momentum of original investigation, for evolutionist conceptions are applied by Dr. Tayler with a fertility and a novelty as courageous as their results are inspiring.

His evolutionist doctrines cannot be adequately summarised in the space here available. But two of his main contentions may be noted. Looking at western civilisation from the environmental point of view, he sees two large formative processes at work. There is a process which operates in the direction of selecting the palæogenic types and eliminating the neogenic; and there is a process which sociologically runs counter to this, and operates in the contrary direction, tending to select the neogenic types and eliminate the palæogenic. The social environment which, in its characteristic domestic and occupational phases, pertains to the plutocratic and the aristocratic scheme of life is, in point of selective efficacy, stated to be the sociological equivalent of the disease and poverty, the crime and vice of the urban slums. In contrast to the social selection exercised alike by impoverished and luxurious environments, Dr. Tayler finds the counter process in the cultural activities associated with most professional and some artisan occupations.

Such being the speculative foundations, it will be readily seen that Dr. Tayler's practical policy of social progress lies in environmental modification consciously planned by the scientific sociologist. The immediate practical question thus resolves itself into asking who and where is the scientific sociologist and what are his credentials? The human control of environmental modification has hitherto—at any rate since the Reformation—lain with the statesman and politician, and such theoretical guidance as the practical reformer has received from theologian and historian, and in later times from economist and journalist, has not been without a certain element of scientific foundation. But the guidance of a new spiritual order is appearing. Indications of this are visible on all sides. To say nothing of Mr. Wells and other competent popularists, examples may readily be drawn from more recondite sources. By the president of the Scottish College of Physicians, medical men were recently exhorted, with missionary fervour, to organise a crusade for the development of a hygienic conscience. From the rostrum of the Sociological Society Mr. Galton has preached a eugenic conscience. A recent presidential address of the Anthropological Institute came very near to preaching an ethnic conscience; and have not the psychologists for half a generation or more been preaching a pedagogic conscience?

It is indeed manifest that we are here in contemplation of that most thrilling spectacle of human drama

—the birth-throes of a new spiritual power. And in the new spiritual orders there will be, as always in the past there have been, individuals of the militant type—brethren not content with crook and cassock, book and bell, but demanding the sword of temporal power. In this respect the observation may be made that great as is the theoretical and scientific interest of Dr. Tayler's book, yet its practical symptomatic interest is perhaps still greater; for it is diffused with the militant spirit, and thus it becomes a matter of political concern to ascertain how many fighting brothers of Dr. Tayler's calibre are to be found in the order of the Neo-æsculapians.

#### ELECTRICITY, OLD AND NEW.

*Propagation de l'Electricité.* By Marcel Brillouin. Pp. vi+398. (Paris: A. Hermann.) Price 15 francs.

IN this book we have a reproduction of a course of lectures delivered by Prof. Brillouin at the Collège de France during the session 1902-03. They were presumably addressed to an audience possessing already a fair knowledge of electrical theory. The author, therefore, does not aim at giving a complete and connected account of the subject, but, with a freedom which less fortunate teachers will envy, selects those parts which seem to him most interesting from a historical or theoretical point of view. The subject matter of the course now published falls under two heads; first, an exposition of fundamental principles, characterised by great fulness in the historical setting and originality in the order adopted, and second, a detailed discussion of certain special problems. The style is admirably clear, and the whole book is written with a freshness which makes it very interesting reading.

The title is taken to cover steady as well as varying currents. Accordingly, the first four chapters are devoted to an account of the work of the pioneers, beginning with Cavendish—that wonderful human electrometer who estimated P.D. by the kick in his elbows—and coming down to Kirchhoff and Clausius. The author traces very clearly the gradual progress towards definiteness in the ideas of the magnitudes which figure in Ohm's law. Of Ohm's work a specially full account is given; stress is laid upon the fact that Ohm, in formulating his theories, was influenced constantly by the desire to coordinate experimental results, and was not, as is sometimes represented, guided merely by an *a priori* analogy between thermal and electrical phenomena.

Following this historical introduction we have the development of the theory of conduction in three dimensions. Among the special cases dealt with are the resistance of a circular cylinder treated by Bessel's functions, and the "end-correction" for a wire by Lord Rayleigh's method of approximations.

The discussion of varying currents is next taken up, beginning with the case in which the influence of capacity only needs to be considered. An excellent account is given of Lord Kelvin's theory of the cable.